UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr><td rowspan="3">Office Action Summary</td><td>Application No.
10/629,601</td><td>Applicant(s)
NAKAMURA, MASAHIRO</td></tr>
<tr><td>Examiner
Sunray R. Chang</td><td>Art Unit
2121</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2003*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-25* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☒ All　b)☐ Some * c)☐ None of:
　　　　1.☒ Certified copies of the priority documents have been received.
　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Examiner's Detailed Office Action

1.   This Office Action is responsive to communication, filed on July 30th, 2003.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   The invention as disclosed in claims 1 – 25 are rejected under 35 U.S.C. § 101 as being

non-statutory subject matter, see In re Comiskey, Case No. 2006-1286, at 8, 16-21, (Fed. Cir.,

September 20, 2007). "Only if the requirements of § 101 are satisfied is the inventor allowed to

pass through to the other requirements for patentability, such as novelty under § 102 and, non-

obviousness under § 103." "Moreover, ... when an abstract concept has no claimed practical

application, it is not patentable."

3.   Regarding Claim 1, there is no practical output from the function object data as claimed

corresponding to any process, apparatus or method. For example, "functional object data"

including several "identifiers" corresponding to different "functional objects", "to achieve

function control over the function object", there is no practical output to the real world to control

or the like.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claim 1 has been rejected for using the term, "optionally", a similar holding was reached with regard to the term "optionally" in Ex parte Wu, 10 USPQ2d 2031 (Bd. Pat. App. & Inter. 1989). In the instance where the list of potential alternatives can vary and ambiguity arises, then it is proper to make a rejection under 35 U.S.C. 112, second paragraph, and explain why there is confusion.

The "name identifiers" allocated to "functional objects" or allocated to "function control data" are distinct to each other. The usage of "optionally" would differ the scope of the whole invention. Appropriate corrections are required.

5.   Claim 1 has been further rejected under 112 second paragraph for a limitation, "whether a relation between a name identifier allocated to a functional object having a predetermined relation to one functional object", wherein "a name identifier" fails to indicate if it is one of "name identifiers", "a second name identifier" or it is representing a 3rd identifier, different from "name identifiers" or "a second name identifier".

6.   Claim 1 has been further rejected under 112 second paragraph, for conflict usage of "a second name identifier" in the same claim for different limitations. The second "a second name identifier" has been interpreted to be "the second name identifier" hereinafter.

7.   Claims 2 and 3 have been rejected under 112 second paragraph, for the usage of a term,

"the name identifier", which is not clearly indicated as "the name identifier" or "the second name

identifier" causing the confusion when trying to understand what the applicants are trying to

claim.

8.   Claim 4 has been rejected under 112 second paragraph, for using vague and indefinite

limitation in the claim, "attributive relation data indicative of a relation between roles to be

played by the respective functional objects to produce an expected phenomenon" which is not

understandable by a person with ordinary skill in the art.

         Further, "structure relation data" has not been previously cited in relation to "wherein" as

claimed in Claim 4.

9.   Claim 11 has been rejected under 112 second paragraph, for using indefinite limitation in

the claim, "data" which is not clear defined to be "imaging data", "function object data" or a

"function control data".

10.   Claims 6 and 19 have been rejected under 112 second paragraph, for using indefinite

limitation in the claims, "unit control data items", which is not clearly defined how to related

with "the specification data" to produce "function control data".

11.   The office action listed below has been presented based on the examiner's best understanding and interpretations of this application from the specification.

Claim Objections

12.   Claim 25 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 25 depending on both claim 12 and 18, in which claim 18 depends on claim 12. See MPEP § 608.01(n). Accordingly, the claim 25 has not been further treated on the merits.

Priority

13.   Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

        Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Claim Rejections - 35 USC § 102

        The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

14.   Claims 1 – 25 is/are rejected under 35 U.S.C. 102(e) as being anticipated by Yohsuke

Kinoe et al. [US Patent No. 6,337,700 and referred to as **Kinoe** hereinafter).

Regarding claim 1, **Kinoe** teaches,

▪ functional object data, comprising: at least imaging data for imaging <u>functional resources</u> as

   functional objects in a virtual space [a group of graphical objects which are a set of a plurality

   of graphical objects is displayed on a display screen, Abstract] and

▪ name identifiers allocated to the respective functional objects, and function control data for

   provoking or creating a function of a functional object as a subject of control [object name,

   object definition data, col. 11, lines 42 – 45] and

▪ a second name identifier allocated to the object as the subject of control, [pointer, col. 11, lines

   42 – 45; an operator selects one graphical object from a group of graphical objects, Abstract;

   operator clicks the mouse on the screen, col. 11, lines 30 – 35]

▪ the functional object data having a structure to allow a computer to judge whether a relation

   between a name identifier allocated to a functional object having a predetermined relation to

   one functional object [The event detection part 105 determines the content of the input

information delivered from the input part 103, col. 9, lines 36 – 46] and the second name

identifier allocated to the one functional object satisfies a predetermined condition, interpret

function control data on the one functional object when the relation is judged to satisfy the

predetermined condition, and control either directly or indirectly imaging data on the

functional object having the predetermined relation to the one functional object based on the

interpretation thus made to achieve function control over the functional object having the

predetermined relation to the one functional object. [The event detection part 105 determines

the content of the input information delivered from the input part 103, The graphical display

status modification part 106 modifies various parameters such as modification of a view point

coordinate value, modification of magnification and modification of the reference plane data to

be described later, etc., corresponding to modification of the display status (zoom, rotation,

etc.) of graphical object (group) based on operator's operation, col. 9, lines 36 – 46]

Regarding claim 2, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the name identifier comprises a plurality of parallel name identifiers. [Fig. 3]

Regarding claim 3, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the name identifier comprises a plurality of element name identifiers forming a hierarchical

    structure. [Hierarchy Display Attribute, Fig. 4, col. 11, lines 46 – 62]

Regarding claim 4, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the predetermined relation is expressed by spatial relation data indicative of a spatial relation

  between the functional objects, structural relation data indicative of a coupling relation

  between the functional objects, [graphical object hierarchy definition data manages a

  hierarchy relationship among graphical objects, col. 10, lines 33 – 35; fig. 2 and 5]

- attributive relation data indicative of a relation between <u>roles</u> to be <u>played</u> by the respective

  functional objects to produce an expected phenomenon, **or** a combination thereof, while the

  computer is capable of retrieving and extracting the functional objects based on the spatial

  relation data, structural relation data, attributive relation data, **or** a combination thereof. [the

  display processing part extracts a graphical object to be displayed from the graphical

  definition data, col. 10, lines 42 – 49; more detail can be found in "B. System Configuration"

  col. 9, line 17 – col. 10, line 54 and "C. Description of Operation"]

Regarding claim 5, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the function control data is structured to be capable of being added, deleted or modified

  independently of the imaging data. [updates a flag (depth display attribute 213, hierarchy

  display attribute 215, highlight attribute 217) of the graphical object display status table 109

  depending on the content of an event based on an operator's input, col. 10, lines 12 – 19]

Regarding claims 6 and 19, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the function control data is of a structure comprising a plurality of unit control data items capable of being added, deleted or modified independently of the imaging data. [updates a flag (depth display attribute 213, hierarchy display attribute 215, highlight attribute 217) of the graphical object display status table 109 depending on the content of an event based on an operator's input, col. 10, lines 12 – 19]

Regarding claim 7, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the function control data is of text form. [109, Fig. 4]

Regarding claim 8, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein

- the function control data has a hierarchical structure in which a higher-level unit control data item belonging to a higher-level hierarchy is related to at least one lower-level unit control data item belonging to a lower-level hierarchy. [depth attribute, hierarchy display attribute, fig. 4; whether to normally display or non-display the graphical object, col. 9, line 66 – col. 10, line 20]

Regarding claim 9, **Kinoe** teaches,

The functional object data in accordance with claim 1, further comprising

- utilization data indicative of a status of utilization of the functional objects in the virtual space. [109, Fig. 4; col. 9, line 66 – col. 10, line 20]

Regarding claim 10, **Kinoe** teaches,

The functional object data in accordance with claim 1, further comprising

- indicator data for quantitatively or qualitatively evaluating utilization of the functional objects in the virtual space. The graphical object display status table 109 is a table for controlling the display attribute of graphical objects. The content of the table is sorted in the direction of the depth (normal direction) with respect to the current reference plane 108, col. 9, lines 58 – 65]

Regarding claims 11 and 17, **Kinoe** teaches,

The functional object data in accordance with claim 1, wherein:

- the functional objects each have a joint described by data capable of indicating a relative or absolute position of the joint in the virtual space; [the 3 D graphics software is used in reviewing the design or layout of parts in the whole automobile based on designed parts which are assembled into a 3D mockup, col. 1, lines 14 – 19] and

- the computer is configured to be capable of coupling plural functional objects together in the virtual space by coupling the joints of the respective functional objects together. [the 3 D

graphics software is used in reviewing the design or layout of parts in the whole automobile

based on designed parts which are assembled into a 3D mockup, col. 1, lines 14 – 19]

Regarding claims 12, 18, 21 and 22, **Kinoe** teaches,

- An object data receiving unit for use in a functional object imaging system, comprising: an

  object data receiving section for receiving functional object data as recited in claim 1; and an

  object control section operative to retrieve and extract a functional object having a

  predetermined relation to one functional object imaged in a virtual space based on the object

  data received, [various data are recorded in the floppy disk, the hard disk device 13, or a CD-

  ROM 14 and executed by being loaded in the memory 4, col. 8, lines 28 – 30; fig. 13 – 18

  showing the objects which can be imported to be processed; the display processing unit

  extracts a graphical object to be displayed from the graphic definition data, col. 10, lines 42 –

  43] and then

- interpret function control data on the one functional object and control either directly or

  indirectly imaging data on the functional object thus extracted based on the interpretation

  thus made to achieve function control over the extracted functional object in the virtual space

  when a name identifier of the extracted functional object has a predetermined relation to a

  second name identifier of the one functional object. [The event detection part 105 determines

  the content of the input information delivered from the input part 103, The graphical display

  status modification part 106 modifies various parameters such as modification of a view

  point coordinate value, modification of magnification and modification of the reference plane

  data to be described later, etc., corresponding to modification of the display status (zoom,

rotation, etc.) of graphical object (group) based on operator's operation, col. 9, lines 36 – 46;

similar with claim 1]

Regarding claim 13, **Kinoe** teaches,

The object data receiving unit in accordance with claim 12, further comprising

- a recording section for recording a history of operation having been performed on the unit to

  image functional resources as the functional objects in the virtual space and a phenomenon

  having occurred in the virtual space. [The operation history stack 116 is a stack for recording

  an operation history, col. 10, lines 35 – 36]

Regarding claims 14 and 24, **Kinoe** teaches,

The object data receiving unit in accordance with claim 13, further comprising

- a recorded data transmitting section for externally transmitting data recorded by the recording

  section. [The graphical object display control system 100 may communicate with other

  computers and the like via a communication adapter 18 such as a serial port 15, a modem or

  a token ring, col. 8, lines 42 – 45]

Regarding claim 15, **Kinoe** teaches,

The object data receiving unit in accordance with claim 12, further comprising

- an indicator data calculating section for calculating an indicator allowing a user to operate the unit efficiently based on a history of operation having been performed on the unit to image functional resources as the functional objects in the virtual space and a phenomenon having occurred in the virtual space. [The operation history stack 116 is a stack for recording an operation history. In the preferred embodiment of this invention, a current position of the pointer (X, Y), a reference point of the pointer (OLDX, OLDY), an Index value for specifying a graphical object currently under processing, and information of the graphical object display status table 109 are stored in the stack as elements, col. 10, lines 35 – 41]

Regarding claims 16 and 25, **Kinoe** teaches,

The object data receiving unit in accordance with claim 15, wherein

- the indicator is calculated based on data on utilization of the object data receiving unit including utilization frequencies within a fixed period and a total utilization time.

- at least one of which is provided with a charging management section for conducting processing related to charging for utilization of functional objects. [the purpose for "utilization frequency" is to increase "efficiency" of a design work and which would reduce the expenses for developing a product, which has been disclosed in **Kinoe,** col. 18, lines 17 – 27]

Regarding claim 20, **Kinoe** teaches,

The object data transmitting unit in accordance with claim 18, wherein

- each of the unit control data items includes a name identifier of an applicable functional object, while the object data forming section is operative to fetch a unit control data item including a name identifier matching a name identifier of a functional object as a subject of control. [object name, object definition data, col. 11, lines 42 – 45]

Regarding claim 23, **Kinoe** teaches,

The object data transmitting unit in accordance with claim 18, wherein

- the functional object represents personnel including part-time workers and employees stationed in a layout space of a factory, office or house, **or** an article including industrial machines, office equipment and furniture disposed in the layout space. [fig. 13 – 18]

Correspondence Information

15.   Any inquires concerning this communication or earlier communications from the examiner should be directed to Sunray Chang, who may be reached Monday through Friday, between 6:00 a.m. and 3:00 p.m. EST. or via telephone at (571) 272-3682 or facsimile transmission (571) 273-3682 or email sunray.chang@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful in the regular office hour, the Examiner's Supervisor, Albert Decady, may be reached at (571) 272-3819.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Finally, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Moreover, status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) toll-free @ 1-866-217-9197.

Sunray Chang
Patent Examiner
Art Unit 2121
April 2, 2008

/Albert DeCady/

Supervisory Patent Examiner, Art Unit 2121